

REMARKS

The undersigned thanks Examiners Yu and Le for the courtesies extended during the interview of July 19, 2006. Prior to the interview, the undersigned sent a draft of the Amendment to the Examiner by fax. During the interview, the undersigned explained the differences between the invention of claims 1 and 33 and the teachings of Schultz. These differences are explained below. At the conclusion of the interview, the Examiner said that the Amendment would overcome the pending rejections over Schultz, but Examiner Yu still needs to undertake a new prior art search. The undersigned agreed.

The amendment of claims 1 and 33 is supported by the disclosure in paragraphs [0033] and [0041] and Figure 1 of the specification. As shown in Figure 1, the one or more SERS-enhancing nanoparticles stationary, i.e., not mobile, within in the gel. As explained in paragraph [0041], the gel has a sponge like structure to sieve molecules of a desired size range. As explained in paragraph [0033], the sieving or separation of molecules occurs by electrophoresis or magnetophoresis.

The embodiments of this invention relate to a gel matrix comprising a gel comprising pores having a size to sieve molecules of a desired size range by electrophoresis or magnetophoresis and one or more SERS-enhancing nanoparticles *stationary within the gel*, the SERS-enhancing nanoparticles within the gel having an attached probe that binds specifically to an analyte. As explained in paragraph [0033], when a gel matrix of the embodiments of the invention is exposed to an analyte, some of the molecules of the analyte bind to the probes of the SERS-enhancing nanoparticles that are stationary within the gel. The unattached molecules of the analyte are then separated from the attached molecules of the analyte by electrophoresis or magnetophoresis.

On the other hand, Schultz discloses in column 6, line 65 to column 7, line 1, "In one embodiment, the target is a polynucleotide present as a separated band in an electrophoresis gel, and the contacting is carried out by exposing the surface of the gel to PREs under hybridization conditions."

Also, Schultz discloses the following in column 30, lines 48-66:

PRP conjugates and free PRPs can be separated by conventional biochemical methods including column chromatography, centrifugation, electrophoresis and filtration. Because PRPs with surface localized molecules or entities can have a significantly different *mobility* than do free PRPs of the same size, they elute from gel filtration columns at a different rate than do free PRPs. Because PRPs are charged particles, they migrate in an electric field. Thus, PRPs can be manipulated by and even observed during electrophoresis.

PRPs having certain desired characteristics can also be separated based on their Zeta potentials. Zeta potential separation equipment suitable for this use is commercially available (Coulter Corp, Florida). Radiation pressure may also be used to force PRPs through a matrix at different rates depending on their structural properties. If bound and free PRPs are subjected to electrophoresis in, for example, an agarose or acrylamide gel, the free PRPs migrate faster than do the bound PRPs. [Emphasis added.]

In short, in column 6, line 65 to column 7, line 1, Schultz discloses separation of target molecules by electrophoresis and then contacting the separated band of the target molecules to PRE's under hybridization conditions. Column 30, lines 48-66 of Schultz relates to separation of PRPs conjugated with target molecules from free PRPs and teaches that this separation can be done electrophoresis. Schultz teaches that "PRPs with surface localized molecules or entities can have a significantly different *mobility* than do free PRPs of the same size," thereby clearly indicating the PRPs of Schulz are mobile, *not* stationary (as recited in claim 1) within the electrophoresis gel of Schultz.

However, *nowhere* does Schultz disclose a "a gel matrix comprising a gel comprising pores having a size to sieve molecules of a desired size range by electrophoresis or magnetophoresis and one or more SERS-enhancing nanoparticles *stationary within the gel*, the SERS-enhancing nanoparticles within the gel having an attached probe that binds specifically to an analyte" as recited in claims 1 and 33.

Applicants respectfully submit that the Examiner should not read out the limitation “stationary” in claims 1 and 33 just as the Federal Circuit in *Lewmar Marine Inc. v. Barient Inc.* 827 F.2d 744, 3 USPQ2d 1776, *cert. denied*, 484 U.S. 1007 (Fed. Cir. 1988), explained that even the word “only” cannot be read out of a claim. “The claim limitation could possibly read on the American Eagle winch if the word ‘only’ did not appear in that clause. The word ‘only,’ however, is there and may not be read out of the claims.” *Id.* Similarly, in this case, the word “stationary” may *not* be read out of the claims.

In the event that the Patent and Trademark Office determines that an extension and/or other relief is required, applicants petition for any required relief including extensions of time and authorize the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to with the filing of this document to Deposit Account No. 03-1952 referencing docket no. 070702007400.

Dated: July 24, 2006

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